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Spotlight on Agriculture

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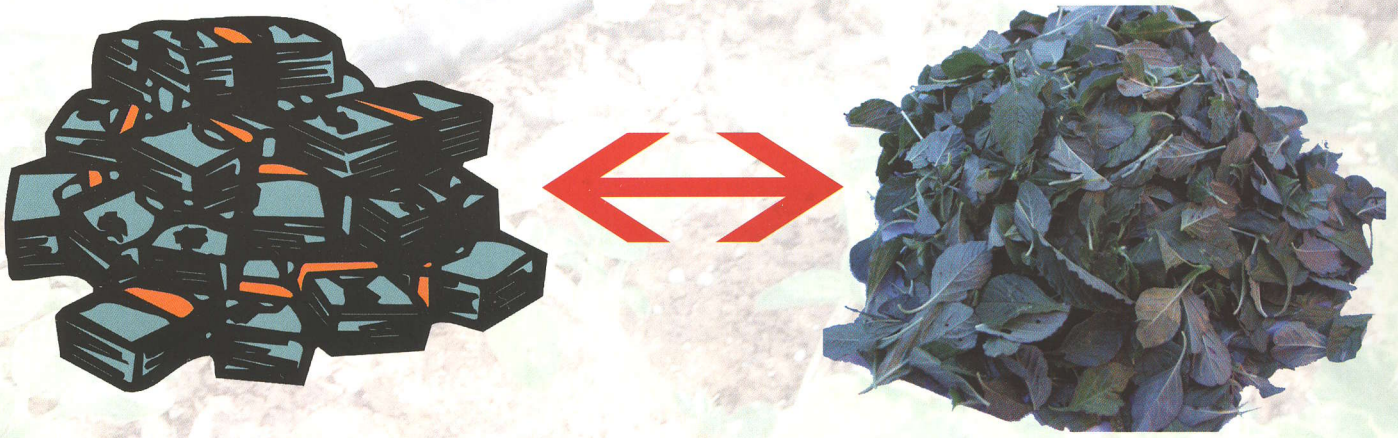
THE POTENTIAL OF TRADITIONAL GREEN LEAFY VEGETABLES – ECONOMIC OPTIONS

INTRODUCTION

Glossary of abbreviations: EU: European Union, IGLV: Indigenous Green Leafy Vegetables, IPTT: Indigenous Plant Task Team, NASSP: National Agricultural Support Services Programme, NBRI: National Botanical Research Institute, SME: Small and Medium Enterprise, TGLV: Traditional Green Leafy Vegetables, UPDP: Useful Plant Development Programme, VIVA: Vigorous Indigenous Vegetables from Africa.

Many of Africa's traditional vegetables, particularly the green leafy vegetables, are weedy, semi-cultivated species that have received very little attention in the way of research, management and inputs. Having reviewed the cultivation and processing trials in the previous two issues of *Spotlight on Agriculture*, we will now discuss the economic value of these traditional leafy vegetables.

As a reminder, the leafy vegetables mentioned in the previous two issues are known under different local names, such as *ekwaka* (Oshiwambo), *mboga* (Rukwangali), *tepe* (Silozi) for ***Amaranthus thunbergii***; *ombidi* (Oshikwanyama), *mpungu* (Rukwangali), *shishungwa* (Silozi) for ***Cleome gynandra***; and *omutete* (Oshiwambo), *mutete* (Rukwangali), *mundambi* (Silozi) for ***Hibiscus sabdariffa***.



Comparison of different **gross margins for cultivation on ¼ ha**.

Selling price for fresh cleaned leaves	At N$7/kg	At N$8/kg	At N$12/kg (incl. processing)
	Gross margins	Gross margins	Gross margins
Rain-fed	887.5	1862	2987.5
Irrigated (electric)	627.5	1602.5	2727.5
Irrigated (solar)	277.5	1252.5	2377.5
Urban area	-234.5	740.5	< 600*

* Including water consumption for washing and sorting.

These margins are for one income cycle of approximately two months. The rain-fed cultivation would be limited to two cycles, while the drip irrigation could expect **as many as** three cycles (cold weather would reduce production beyond this period). Furthermore, a four-day drought might cause failure of a crop cultivated under rain-fed conditions only.

In accordance with the prior findings of the final **Marketing and Processing report**, as well as the cultivation trials, ***Amaranthus thunbergii* seems to be the favourite candidate** for making a profitable venture for an SME.

Processing/preservation trials should be conducted close to the cultivation and harvesting areas, to minimize the problems of quality deterioration during handling, packaging and transport.

- Cleaned and processed traditional vegetables have good consumer acceptance and can attain margins much higher (up to double) than those sold on the informal markets.

- Simple processing methods, such as blanching and deep-freezing, will give the best margins and keep most of the texture, appearance, organoleptic characteristics and nutrients, and these will last for at least three to four months.

However, neither *Hibiscus sabdariffa*, (which is the easiest to cultivate) nor *Cleome gynandra* (which is still preferred as an additive to an *Amaranthus thunbergii* processed mix) will be neglected in any forthcoming programme. The scenario below will be applicable to all three indigenous/traditional leafy vegetables.

The following viable options are possible for traditional green leafy vegetables:
Option 1: See the TGLV (Traditional Green Leafy Vegetables) as a catch crop only, and base the processing on this supply;
Option 2: See TGLV as a crop to cultivate under rain-fed conditions;
Option 3: See TGLV as a crop to cultivate under drip irrigation.

GENERAL RECOMMENDATIONS

Potential strengths and weaknesses of TGLV as a "catch crop"	
(Potential) strengths Sole input would be the payment for delivery **at approximately N$20/4 kg/day/adult**.	*(Potential) weaknesses·* · Limited quality control · Limited control of assured quantity to be expected per cycle (risk of over- and under-supply) · Additional work to select, clean and trim during processing · Limited durability (need for deep-freezing and/or advanced processing, blanching, etc, in order to be able to supply all year round and secure a higher price).

Potential strengths and weaknesses of TGLV cultivated as a rain-fed crop	
(Potential) strengths Lower inputs and highest gross margin per cycle	*(Potential) weaknesses* · Vulnerable to drought spell, which might cause complete crop failure · Limited to 3 months

Potential strengths and weaknesses of TGLV cultivated under drip irrigation (electrical pump)	
(Potential) strengths · Good gross margins per cycle · Can produce for 6 months	*(Potential) weaknesses* · Higher start-up capital needed · Existing power supply required · More trained labour needed

Potential strengths and weaknesses of TGLV cultivated under drip irrigation (solar pump)	
(Potential) strengths · Good gross margins per cycle · Can produce for 6 months · No need for power supply · Running costs lower than for above	*(Potential) weaknesses* · Very high start-up capital · More trained labour needed

Potential strengths and weaknesses of TGLV cultivated under drip irrigation (urban area)	
(Potential) strengths · Can produce for 6 months · Close to the market	*(Potential) weaknesses* · Low gross margins · High water costs · More trained labour needed · High town council fees for setting up business

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